

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2018/0311585 A1

Nov. 1, 2018 (43) Pub. Date:

(54) SECOND SCREEN VIRTUAL WINDOW INTO VR ENVIRONMENT

A63F 13/213 (2014.09); A63F 13/525 (2014.09); **A63F 13/35** (2014.09)

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Appl. No.: 15/963,047

(22)Filed: Apr. 25, 2018

Related U.S. Application Data

Provisional application No. 62/492,100, filed on Apr. 28, 2017.

Publication Classification

(51) Int. Cl. A63F 13/655 (2006.01)H04L 29/06 (2006.01)A63F 13/26 (2006.01)A63F 13/35 (2006.01)A63F 13/40 (2006.01)A63F 13/213 (2006.01)A63F 13/525 (2006.01)

(52) U.S. Cl.

CPC A63F 13/655 (2014.09); H04L 67/38 (2013.01); A63F 13/26 (2014.09); A63F 2300/8082 (2013.01); A63F 13/40 (2014.09);

(57)ABSTRACT

Methods for observing a virtual reality environment of a virtual reality player is are provided. One method includes establishing, by a handheld device of an observer, a connection with a computer executing the virtual reality environment being presented to the virtual reality player using a head mounted display (HMD). Capturing, by a first camera of the handheld device, a current position of the virtual reality player in a real world space. Capturing, by a second camera of the handheld device, a face position of the observer. The face position being monitored to determine a viewing direction to a screen of the handheld device. The screen of the handheld device is configured to present the virtual reality environment and at least part of the virtual reality player interacting in the virtual reality environment. A current position of the handheld device and the face position of the observer are continually shared with the computer executing the virtual reality environment presented to the virtual reality player. The method then enables receiving, from the computer, a video stream of the virtual reality environment that includes at least part of the virtual reality player adjusted for the current position of the virtual reality player in the real world and the viewing direction of the observer to the screen of the handheld device.

